



Environmental Health Literacy: Can the Public Be Healthy Without it?

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We live in an ever changing
landscape of health and
environmental risk (& fear)

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**“WHEN I HAVE AN
ASTHMA ATTACK
I FEEL LIKE A FISH
WITH NO WATER.”**

—JESSE, AGE 5



ATTACK ASTHMA. ACT NOW.
1-866-NO-ATTACKS
WWW.NOATTACKS.ORG

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KATRINA: THE STORM WE'VE ALWAYS FEARED
The Times-Picayune

**‘HELP US,
PLEASE’**

**AFTER THE DISASTER, CHAOS AND
LAWLESSNESS RULE THE STREETS**



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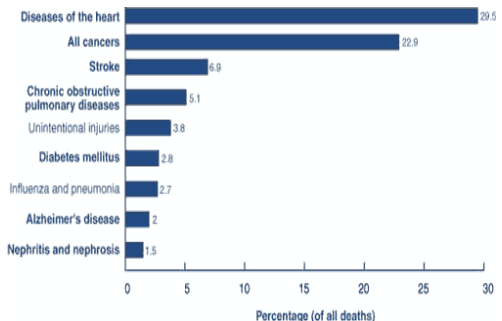
WHO Warns of More Bird Flu Cases



- **GENEVA (CNN) --** The World Health Organization has announced a third confirmed case of H5N1 avian flu in Indonesia and warns of more to come.

Sept. 22, 2005; 6:53 p.m. EDT (22:53 GMT) Health workers inspect an exotic bird at a bird market in Jakarta, Indonesia, earlier this week.

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Source: National Center for Health Statistics, Mortality Report. Hyattsville, MD: U.S. Department of Health and Human Services, 2002. (From DHHS "The Power of Prevention: Steps to a Healthier US Program and Policy Perspective" 2003 <http://www.healthierus.gov/steps/summit/prevportfolio/power/index.html#we>)

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Challenges of Health Outreach, Education, and Communications

- Often top down – deficit model
- Rarely starts with where people are at
- Seldom mindful of fundamental literacy
- Not mindful of health & environmental literacy principles and guidelines

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Functional Literacy

- The National Adult Literacy Study (NALS 1993) 49% (almost half) of all Americans do not have functional literacy above the 8th grade level.
- Twenty five percent (25%) are functionally illiterate – that's 40 to 44 million adults. Another 50 million adults are only marginally literate.

Cont.

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Health Literacy Initiatives

- Institute of Medicine consensus report on Health Literacy (2004)
- Agency for Healthcare Research and Quality (AHRQ) evidence report/ technology assessment (#87) 2004
- American Medical Association
- Health literacy toolkit (incl. video)
- Partnership for Clear Health Communication (AMA, Pfizer, many others)

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Health Literacy Field at Present

- Focused on “plain English” and simplifying
- Defines and measures one dimension of literacy competence and performance
- Foregrounds patient / physician communication
- Backgrounds public health

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Definition of Health Literacy

The wide range of skills, and competencies that people develop over their lifetimes to seek out, comprehend, evaluate, and use health *and environmental* information and concepts to make informed choices, reduce health risks, and increase quality of life.

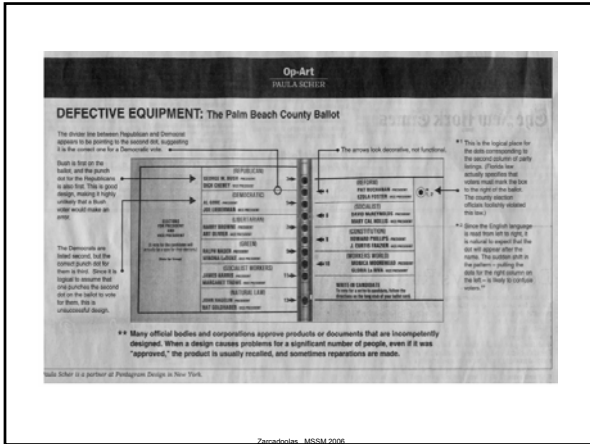
(Zarcadoolas, Pleasant & Greer, 2003; 2006)

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Reality Check

Good communication seems easier than it really is.

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CDC web site definition of anthrax.

Definition

What is anthrax?
What is the case definition for anthrax?

What is anthrax?
Bacillus anthracis, the etiologic agent of anthrax, is a large, gram-positive, non-motile, spore-forming bacterial rod. The three virulence factors of B. anthracis are edema toxin, lethal toxin and a capsular antigen. Human anthrax has three major clinical forms: cutaneous, inhalational, and gastrointestinal. If left untreated, anthrax in all forms can lead to septicemia and death.

What is the case definition for anthrax?

A confirmed case of anthrax is defined as

1. a clinically compatible case of cutaneous, inhalational, or gastrointestinal illness that is laboratory-confirmed by isolation of B. anthracis from an affected tissue or site, or
2. a clinically compatible case of cutaneous, inhalational, or gastrointestinal disease with other laboratory evidence of B. anthracis infection based on at least two supportive laboratory tests.

(Source: <http://www.bt.cdc.gov/Documents/App/FAQAnthrax.asp>)

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Fundamental Literacy

- Reading
- Writing
- Speaking
- Numeracy

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(Text of ad... what does it say in the orange block???)

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If your doctor says you have a cold or the flu, never request an antibiotic.

When prescribed an antibiotic, take it until it is gone — even if you feel better.

Always take an antibiotic exactly as the doctor orders.

At United Health Foundation, we believe that the more you know, the healthier you will be. Which is why we partnered with the CENTERS FOR DISEASE CONTROL & PREVENTION to bring you these important health tips. We encourage you to get more involved in your care, to seek out information and to always make sure that the information you use comes from a reliable, evidence-based source. To find out more on this and other important topics, visit UHFtips.org.



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Definition of Health Literacy cont.

- A health literate person is able to use **health concepts and information generatively – applying information to novel situations**. A health literate person is able to participate in the ongoing public and private dialogues about health, medicine, scientific knowledge, and cultural beliefs.

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4 Domains of Health/ Environmental Literacy

- **Fundamental literacy**
- **Science literacy**
- **Civic literacy**
- **Cultural literacy**

(Zarcadoolas, Pleasant & Greer, 2003; 2004; 2006)

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National Science Foundation Public Understanding of Science

- Only between 5 and 15% of the public qualify as scientifically literate.
- 18% can be considered an attentive science public.

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Science Literacy

- Fundamental scientific concepts, scientific process
- Technology & technical complexity,
- Scientific uncertainty and that rapid change in the accepted science is possible.

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Civic Literacy

- Enable citizens to become aware of public issues, to participate in critical dialogue about them, and to become involved in decision-making processes.
 - Media literacy skills
 - Knowledge of civic and governmental systems and processes
 - Knowledge of power, inequity and other hierarchical relationships
 - Knowledge that personal behaviors and choices affect others in a larger community and society

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"Two residents waded through chest-deep water after finding bread and soda from a local grocery store after Hurricane Katrina came through the area in New Orleans, Louisiana." (APF)

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"A young man walks through chest-deep flood water after looting a grocery store in New Orleans on Tuesday, Aug. 30, 2005. Flood waters continue to rise in New Orleans after Hurricane Katrina did extensive damage when it made landfall on Monday." (AP)

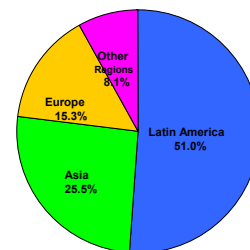
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Cultural Literacy

- Ability to recognize, understand and use the *collective beliefs, customs, world-view, and social identity* of diverse individuals to interpret and act on information. Bilateral - experts should understand aspects of the culture of the recipient and visa versa.

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Percent Distribution of Foreign Born by World Region of Birth: 2000



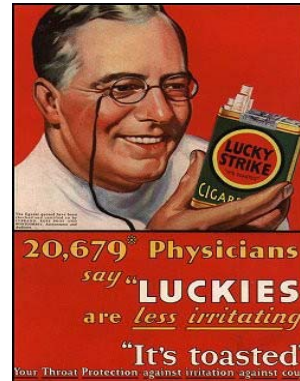
Source: Current Population Survey, March 2000, PGP-3

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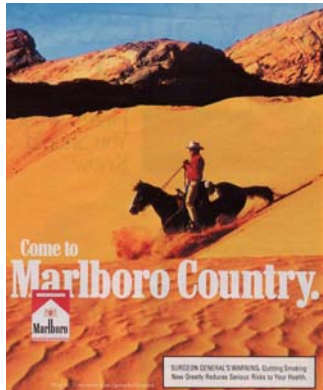
The Sioux San Hospital of Rapid City, South Dakota, is an Indian Health Service (IHS) hospital. (Kibi Conti, working with Lakota Indians



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There is little capacity for health and environmental equity without good, effective communication. There is no civil society without it.

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Being environmentally health literate means much more than understanding the words and sentences of health and environmental information.

Understanding Risk

- Competing risks
- Changing science
- Changing cultural perceptions of risk
- Acknowledging the risk perception can be highly emotional

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Guidelines

- Understand people's current conceptions and cultural models for understanding and acting on environment/ health information
- Collaborate to tailor communications to their environmental health literacy
- Evaluate the impact of communications on an ongoing basis
- Advance the public's environmental health literacy

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Forgive me for writing such a long letter. I did not have the time to write a shorter one.

- Pascal



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Advancing Health Literacy: A framework for Understanding and Action

Christina Zarcadoolas PhD,
Andrew F. Pleasant PhD,
David S. Greer MD.

San Francisco, CA: Jossey-Bass/Wiley (June, 2006)

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Evaluations

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Thank you!

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March 16, 2006

Fish Advisories

Nancy Kim, Ph.D.

**Director, Division of Environmental
Health Assessment, NYS DOH**

7/20/2016 10:05AM 2006